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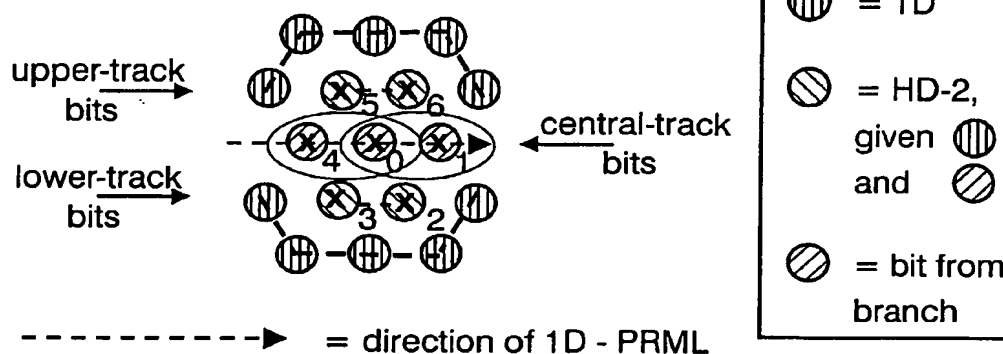
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(54) Title: VITERBI BIT DETECTION METHOD AND DEVICE



(57) Abstract: The present invention relates to a Viterbi bit detection method for detecting the bit values of bits of a channel data stream stored on a record carrier along an N-dimensional channel tube, N being at least two, of at least two bit rows one-dimensionally evolving along a first direction and being aligned with each other along at least a second of N-1 other directions, said first direction together with said N-1 other directions constituting an N-dimensional lattice of bit positions, comprising application of a row-based one-dimensional Viterbi bit detection method independent for each of the bit rows of said channel tube. To achieve a reliable bit detection a number of independent one-dimensional row-based Viterbi bit detectors, also known as sequence detectors, is used, one for each bit row in the channel tube: the interference between successive neighbouring bit rows is taken into account via the computation of the branch metrics (for the considered bit row), in which local bit decisions on the primary neighbouring bits in the neighbouring rows are used.



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